Sustainable PPP/PFI

Delivering Sustainable Urban Public Infrastructure in China Through PPP/PFI: Lessons from a £300 Million UK Social Housing Procurement Project.

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- PPP/PFI Context
- Opportunities in PFI
- Challenges of PFI
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China's Development

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China's Challenge

How to continue rapid economic development?

How to provide the necessary public infrastructure?

How to develop sustainably…..

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PPP/PFI for China?

- Chinese authorities advocating funding infrastructure and public works through PPP models

- Reaction to growing concerns over rising local government debts incurred through local financing vehicles.

- Particular interest in PFI pioneered in the UK

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PFI in the UK

- Has delivered new hospitals, schools, housing, and civil infrastructure over last 25 years

- Enabled public sector to retain some control

- Improved public sector project management skills

- Introduced better risk management in local government

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PFI in the UK

- Often failed to meet public expectations
- Left the public purse with £20 Billion ‘extra’ borrowing costs
- Generated £4 Billion for lawyers and other consultants
- Many projects ‘tarnished by waste, inflexibility and lack of transparency’
- Many contracts too one sided

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PFI in China - opportunities

- Huge opportunities to deliver much needed infrastructure
- The value of contracted projects reached nearly 1 trillion yuan 2015
- Has resulted in reduction in local government debt
- Opportunity to learn from lessons of other country's
- Will have implications globally

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PFI in China - challenges

- Developing economy means forecasting is difficult
- Changes to government plans add risk to projects
- Average returns low at around 8%
- Lack of skills and knowledge - particularly in public sector
- Pace of contract negotiation is challenging

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Sustainable Development

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Sustainable PPP/PFI

- Can PPP/PFI deliver sustainable public infrastructure?

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Case Study

North Tyneside Council Quality Homes for Older People

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Overview of the project

- Total transformation of housing for elderly people
- Rebuild, Redesign and Refurbish of 33 housing schemes - 1000 homes
- £112 Million PFI Government Credit
- 30 year design, build and maintain contract

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Overview of the problem

- Too many buildings in the wrong location
- Outdated designs
- Not compliant with regulations
- Very energy inefficient
- 42% Increase in demand from 60+ people
- No budget at local government level

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Key Challenges

- Requirement for Gov sign off
- £300 Million financial commitment
- Involvement of tenants and local people
- Affordable, sustainable, desirable

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Key Challenges

- How to get exemplar buildings
- Future proof designs
- Reduce CO2 emissions
- Enhance well-being
- Meet stakeholder exceptions
- Lack of capacity in local government team

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Renewable Energy Decision Tool

North Tyneside Council

PFI Sustainability Evaluation Tool

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Renewable Energy Decision Tool

This section highlights the issues which must be considered for each renewable technology and is designed to assist in a preliminary decision as to which renewable technology may be suitable for further investigation.

Small Wind	Is there an average wind speed of at least 6m/s on site?	No	Choose another renewable energy option	No	Choose another renewable energy option	No	Choose another renewable energy option	No	Wind power is likely to be a feasible option. Carry out detailed site analysis.		
Solar photovoltaics	Will or can the building have an east, west or south facing roof or flat roof?	No	Choose another renewable energy option	No	Choose another renewable energy option	No	PV is likely to be suitable. Undertake feasibility study to establish optimum size and location of installation				
Solar Thermal	Will the building have a year round hot water demand?	Yes	Does, or will the building have a south, east or west facing roof?	Yes	Is the roof free from overshadowing for most of the day from other buildings, structures or trees?	Yes	Is there space for a hot water cylinder?	Yes	Is the building in a conservation area?	Yes	Solar thermal could be an option. Start early discussion with planners and ensure location is as unobtrusive as possible.
Biomass	Is a communal heating to be installed?	Yes	Is there a potential local supply of fuel?	Yes	Is there sufficient space (or potential for space) for fuel delivery and storage?	Yes	Is the boiler system (or could it be) part of a modular soltion to allow for continuous operation during shutdown and cleaning?	No	Choose another renewable energy option		

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PFI Sustainability Assessment Tool

North Tyneside Council

PFI Sustainability Evaluation Tool

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Section	Heading	Weighting Within Section
Section E1	**Energy**	**30.00%**
Section E2	**Health & Wellbeing**	**20.00%**
Section E3	**Social & Economic**	**24.00%**
Section E4	**Water**	**8.00%**
Section E5	**Materials & Waste**	**8.00%**
Section E6	**Transport**	**5.00%**
Section E7	**Ecology & Pollution**	**5.00%**
Total		100.00%

Important Notice to Bidders:

PLEASE NOTE: The provision of any and all comments/feedback/input/response on drafts/plans/documentation etc. by the Council/its officers, members, advisers/consultants set out above as requested is provided as opinion on behalf of the Council on the specific points raised without any obligations or liability whatsoever and howsoever occasioned on the part of the Council, any of its officers, members, advisers or consultants. Any such comments/feedback/input so provided does not operate or intend to operate in any way to exclude or limit or obviate the person/party making the request the need in making the request for comments/feedback/input/response making own judgment, due diligence, taking and relying on own independent professional advice and assistance.

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Use of established and verified metrics

Ref	Question/Statement	Output Specification (checklist)	Section Ref	Site Specific	Y	N	N/A	Criteria for Assessment			Weight		Score	Evidence (Justification)	
PROJECT:		Crummock(Hybrid)									BIDDER:			A	
SECTION A: Social & Economic															
SECTION B: Health and Wellbeing															
SECTION C: Energy															
D.01	**CO_2 emissions** The building has been designed to minmise CO_2 emissions	Bidder has improved upon the Building Regulations current at the time at which the construction work on is planned to start.	2.8 (iii)					% Improvement of DER over TER as measured in SAP 2009	≥25% Improvement of DER over TER		3 - Very Important		3	3	
D.02	**kWh/m2** The building has been designed to reduce primary energy consumption										2 - Moderately Important		2		
D.03	**Building fabric** The building fabric has been designed to minimise CO2 emissions through enhanced thermal efficiency	Consideration of best practice requirements. The bidder has improved on the U - value requirements of the Building Regulations which are current at the times of the work being carried out.	3.1.7 3.1.7					Roof U-value Ground Floor Walls Windows and doors Total	U-value (W/m2.K) ≤ 0.26 U-value (W/m2.K) ≤ 0.14 U-value (W/m2.K) ≤ 0.35 U-value (W/m2.K) ≤ 0.8, BFRC rating ≥ A Total =		3 - Very Important				
D.04	**Insulation** The building fabric has been designed to minimise CO2 emissions through enhanced thermal efficiency	All appllicable building elements are insulated with regard to best practice						Walls Floor Roof Total			2 - Moderately Important				
D.05	**Air permeability** The building has been designed to minimise energy consumption caused by uncontrolled ait leakage into and out of conditioned spaces	The bidder has improved on the air permeability requirements of the Building Regulations which are current at the times of the work being carried out. Consideration of best practice requirements.	3.3.5 3.1.7					Air Tightness m3/(hr.m2)	Air tightness m3/(hr.m2) ≥ 7.00		2 - Moderately Important			2	
D.06	**Thermal bridging** The building is designed to avoid the usage of cold bridging.	No details that allow cold bridging are used. Condensation prediction calculations submitted for all areas of the construction identifying the probability of condensation forming under the design conditions adopted.	3.3.5 3.3.5								1 - Not important				
D.07	**Ventilation** The buildings ventilation system has been designed to maximise system efficiency	All mechanical ventilation and cooling systems, designed to operate efficiently Local end-user control provided.	3.2.10.6 3.2.10.6					Natural			3 - Very Important				

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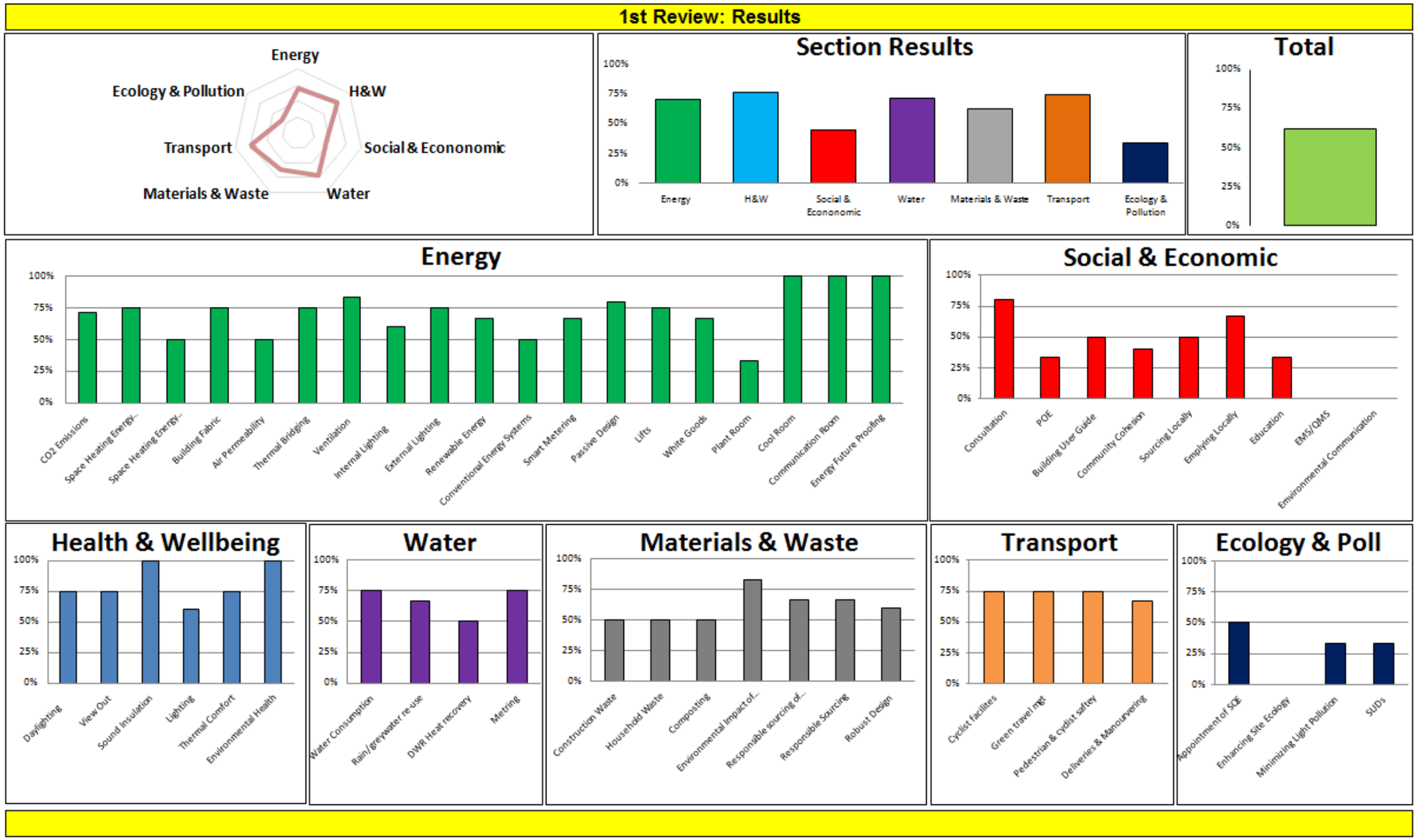
User friendly Outputs - Used in dialogue



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Easy comparison of results

Master Results Page

	Scheme Name	Newbuild/ Refurb	1st Review	2nd Review	Final Review	
			Score	Score	Score	Description
ISDS Schemes	Victoria Court	Refurb	62%	79%	88%	Good Above Expectations
	Crummock Court	New Build	64%	78%	85%	Good Above Expectations
Tranche 1	Pheonix Court	New Build	56%	77%	85%	Good Above Expectations
	Rosebank Hall	Refurb	45%	65%	69%	Satisfactory
	Carville House	Refurb	54%	67%	78%	Meets Expectations andSatisfactory
	Roseberry Court	New Build	45%	66%	89%	Good Above Expectations
	Preston Court	Refurb	45%	50%	57%	Satisfactory but Below Expectations
	Cheviot View	Refurb	65%	68%	73%	Meets Expectations andSatisfactory
	Tamar Court	Refurb	79%	80%	85%	Good Above Expectations
	Clifton Bungalows	New Build	76%	84%	85%	Good Above Expectations
Tranche 2	Bristol Drive	New Build	67%	74%	74%	Meets Expectations andSatisfactory
	Broadway Court	New Build	45%	56%	68%	Satisfactory
	Bisley Court	New Build	47%	69%	90%	Very Good Well Above Expectations
	Rudyerd Court	Refurb	78%	79%	83%	Good Above Expectations
	Skipsey Court	Refurb	75%	76%	78%	Meets Expectations andSatisfactory
	Eccles Court	Refurb	76%	77%	78%	Satisfactory
	Fernedene	Refurb	65%	67%	89%	Meets Expectations andSatisfactory
	Feetham Court	Refurb	76%	78%	83%	Good Above Expectations
Tranche 3	Emmerson Court	Refurb	12%	20%	23%	Very Weak and Almost Unacceptable
	Chapelville	New Build	55%	56%	68%	Satisfactory
	Marden House	New Build	76%	77%	79%	Meets Expectations andSatisfactory
	The Orchard	Refurb	78%	79%	89%	Good Above Expectations
	Fernlea	Refurb	78%	80%	89%	Good Above Expectations
	Eldon Court	New Build	70%	71%	74%	Meets Expectations andSatisfactory
	Southgate Court	Refurb	70%	72%	79%	Meets Expectations andSatisfactory
	Carlton Court	Refurb	74%	80%	90%	Very Good Well Above Expectations
Total		New 10 / Refurb 16	76.2%	76.8%	76.9%	Good Above Expectations

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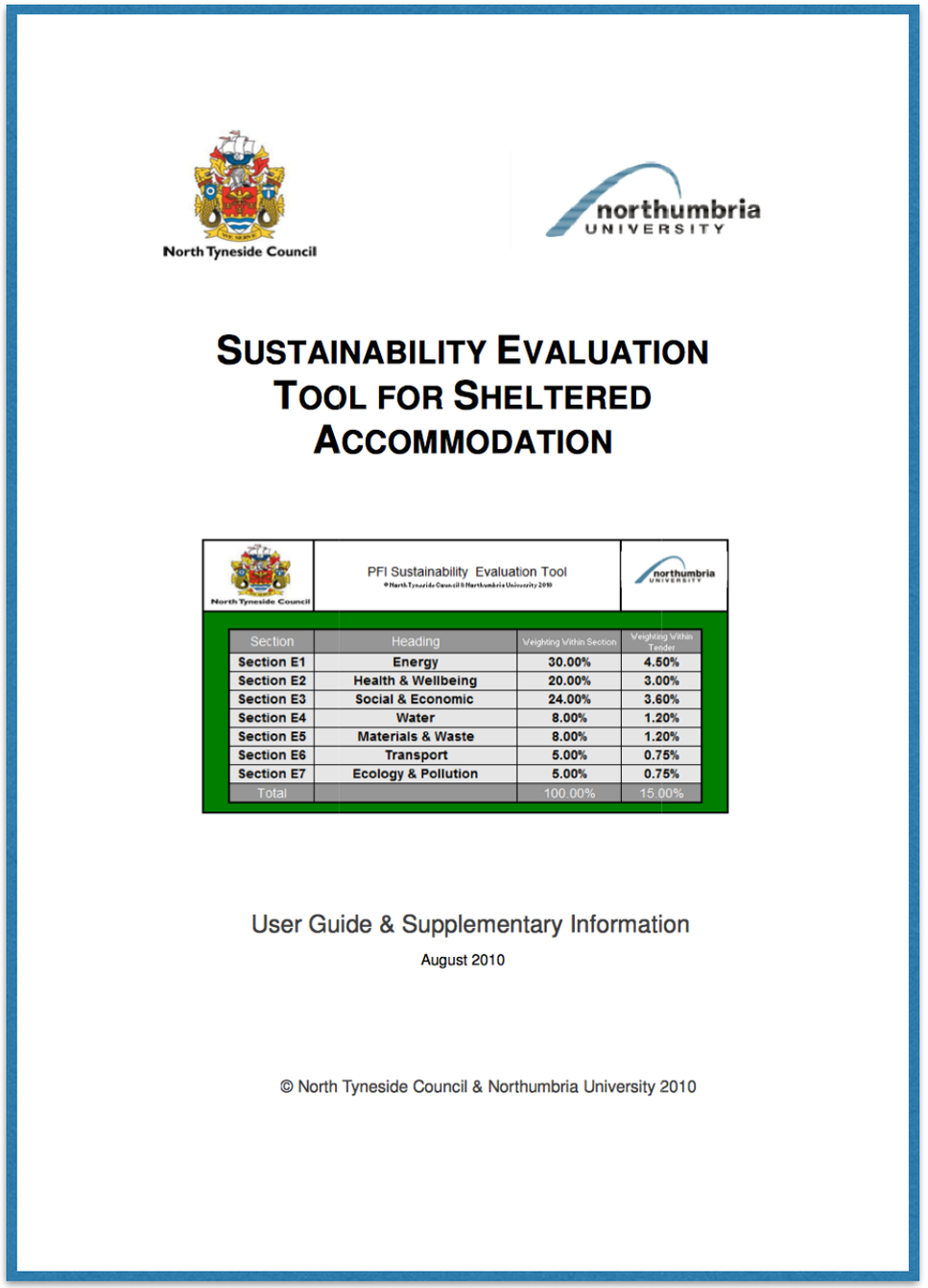
Benefits of the sustainability evaluation tool

- Quantifying design intangibles
- User friendly - non expert
- Improved evaluation efficiency
- Reduction in procurement time and cost
- Replicable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SUSTAINABILITY EVALUATION TOOL FOR SHELTERED ACCOMMODATION

PFI Sustainability Evaluation Tool

Section	Heading	Weighting Within Section	Weighting Within Tender
Section E1	Energy	30.00%	4.50%
Section E2	Health & Wellbeing	20.00%	3.00%
Section E3	Social & Economic	24.00%	3.60%
Section E4	Water	8.00%	1.20%
Section E5	Materials & Waste	8.00%	1.20%
Section E6	Transport	5.00%	0.75%
Section E7	Ecology & Pollution	5.00%	0.75%
Total		100.00%	15.00%

User Guide & Supplementary Information

August 2010

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Results….

Better places to live

Results - Environmentally Sustainable

Results - Environmentally Sustainable

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Results - Socially Sustainable

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Results - Economically Sustainable

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Key Lessons Learnt

- Whole process is incredibly complex
- Requires political will
- Build decision making into the programme
- Requires commitment post procurement
- Consultants not always aware of context
- Private sector partners can change

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Key lessons learnt

PPP/PFI can be used as a vehicle to deliver sustainable urban infrastructure

BUT….

Critical Success Factors

- Need a capable public sector procurement team
- Use of bespoke tools and metrics can help
- Contracts need to be clear, considered and watertight
- Performance metrics should be built into the payment mechanism
- Wide consultation with stakeholders essential
- ‘Boundary spanners’ play a key role

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Thank you

Questions?

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